



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 145  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/521,054

01/12/2005

Takashi Yokokawa

09812.0200

6969

22852

7590

10/04/2006

FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER  
LLP  
901 NEW YORK AVENUE, NW  
WASHINGTON, DC 20001-4413

EXAMINER

RIZK, SAMIR WADIE

ART UNIT

PAPER NUMBER

2133

DATE MAILED: 10/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/521,054		YOKOKAWA ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Sam Rizk		2133	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 July 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-41 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 July 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/17/2006</u>   | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

- Response to the applicant's amendment dated 7/17/2006
- Amended claims 1-41 have been submitted for examination
- Amended claims 1-41 have been rejected

### ***Specification***

1. In view of the applicant-amended title, filed on 7/17/2006 all objections to the specification are withdrawn.

### ***Drawings Objections***

2. In view of the applicant amended drawing, figures 1-11, 12A, 12B, 12C, 13 and 14, filed on 1/30/2006, all objections to the drawings are withdrawn.

### ***Claim Rejections - 35 USC § 101***

3. In view of the applicant-amended claim 41 filed on 7/17/2006 all objections to the claim 41 rejections under section 35 USC § 101 are withdrawn.

### ***Claim Rejections - 35 USC § 112***

4. In view of the applicant-amended claims 20 & 34 and in view of the applicant argument with respect to claim 6, see pages 16-17, filed on 7/17/2006 all objections to the claim 12 rejections under section 35 USC § 112 are withdrawn.

### ***Response to Arguments***

5. Applicant's arguments, see pages 17-21, filed on 7/17 2006 have been fully considered but they are not persuasive.

6. In regard to claim 1, the Examiner disagree with the applicant argument in pages 17-18 that:

"Richardson fails to disclose a decoding apparatus including, for example, "check node calculation means for simultaneously performing p check node computations" and "variable node calculation means for simultaneously performing p variable node computations," as recited in claim 6."

Actually Richardson teaches in col. 11, lines 13-16 that C/V decoder processing operation, to be performed in parallel:

"Since the decoding techniques of the present invention allow for a large number of decoding operations, e.g., constraint and/or variable node decoder processing operations, to be performed in parallel, the decoders of the present invention can be used to decode received words at high speeds."

7. In regard to claim 14, the Examiner disagree with applicant argument in page 19 that:

"For example, claim 14 is not anticipated by Richardson because the reference does not disclose a decoding apparatus where, for example, "said first computation means performs some of said P check node computations and said P variable node computations" and "said second computation means performs some of the others of said P variable node computations," as recited in claim 14."

Richardson teaches in col. 24, lines 57-61 some (Z) of the variable nodes processing and some (Z) of the constraint node processing can be implemented in parallel:

"Various embodiments of individual constraint node processors and individual variable node processors, Z of which can be used in parallel to

implement the constraint node vector processor 1609 and variable node processor 1608, respectively, are described in detail in U.S. Provisional Patent Application No. 60/328,469, titled "Node Processors For Use in Parity Check Decoders", which is being filed on even date herewith, and which is hereby expressly incorporated by reference. The inventors of the present patent application are also the named inventors on the incorporated provisional patent application."

8. The Examiner maintains the rejection of claims 1-41 under section 35 USC §102(b) as being anticipated by Richardson as in the office action filed on 4/17/2006.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Art Unit: 2133

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sam Rizk whose telephone number is (571)-272-8191. The examiner can normally be reached on M-F 8-5.

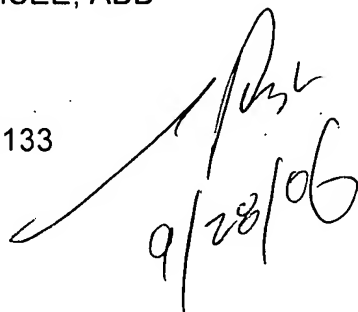
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on (571)272-3819. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Sam Rizk, MSEE, ABD

Examiner

ART UNIT 2133



9/28/06



ALBERT DECADY  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100